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CANADA

NATIONAL ENERGY BOARD
REASONS FOR DECISION

In the Matter of an Application under
the National Energy Board Act

of

Trans Mountain Pipe Line Company Ltd.

May 1981

NATIONAL ENERGY BOARD

REASONS FOR DECISION

IN THE MATTER OF AN APPLICATION UNDER

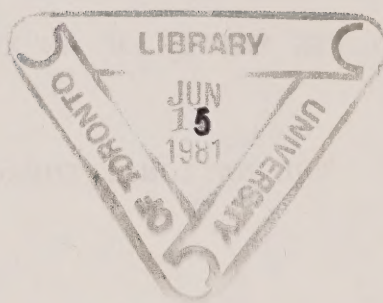
THE NATIONAL ENERGY BOARD ACT

OF

TRANS MOUNTAIN PIPE LINE COMPANY LTD.

MAY 1981

Ce rapport est publié
séparément dans les deux
langues officielles.



NATIONAL ENERGY BOARD

IN THE MATTER OF an application made by
Trans Mountain Pipe Line Company Ltd. for
a Certificate of Public Convenience and
Necessity under Part III of the National
Energy Board Act;

AND IN THE MATTER OF a rehearing under
subsection 17(1) of the National Energy
Board Act to hear evidence and submissions
respecting the impacts of the U.S. project
and the associated tanker traffic upon
the Canadian marine and coastal environment.

(File: 1755-T4-15)

HEARD AT Vancouver, British Columbia on:

25, 26, 27, 28	November 1980
3, 4, 5, 8, 9, 10, 11, 12	December 1980 and
13, 14, 15, 16, 19, 20, 21, 22, 23	January 1981

HEARD AT Victoria, British Columbia on:

1 and 2	December 1980
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HEARD AT Ottawa, Ontario on:

2, 3, 4, 5, and 6	March 1981
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B E F O R E:

R.F. Brooks	Presiding Member
J.R. Hardie	Member
J.L. Trudel	Member

APPEARANCES:

D.M.M. Goldie, Q.C.)	
G.A. Irving)	Trans Mountain Pipe
M.M. Moseley)	Line Company Ltd.
C.B. Johnson)	
J.M. McKenzie)	
Mr. McQueen		British Columbia Hydro and Power Authority

(ii)

Terry Simmons)	British Columbia
David Anderson)	Wildlife Federation
Craig Knutson		Clallam County
R.J. Gibbs, Q.C.)	
C.W. Sanderson)	Foothills Oil Pipe
D.F. Robinson)	Line Ltd.
Wayne Omoth		Interprovincial Pipe Lines Limited
Kim Roberts)	
Nigel Banks)	Scientific Pollution and
John Alexander)	Environmental Control Society
Cliff Stainsby)	
Andrew Thompson		Andrew Thompson
Richard Salter		Union of British Columbia Indian Chiefs
E.N. Hughes, Q.C.		the Government of British Columbia
F. Lamar, Q.C.)	National Energy Board
H. Wetston)	

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BACKGROUND

In April 1979, Trans Mountain Pipe Line Company Ltd. applied for a certificate under Section 44 of the National Energy Board Act to authorize the construction and operation of a 762 mm diameter crude oil pipeline extending some 927 km from the International Boundary near Sumas, Washington to Edmonton, Alberta. The proposed pipeline would form a part of a pipeline system to transmit crude oils from a marine receiving terminal at Low Point, Washington to refineries in the land-locked northern states of Montana, North Dakota, Minnesota and Wisconsin, and others in the state of Washington.

The Board held a public hearing of the application in Vancouver in October and November 1979. The decision flowing from that public hearing was given in the Board's report of January 1980 containing its reasons for decision. In that report, the Board stated that it was satisfied on all matters related to the construction and operation of the section of the pipeline in Canada for which certification was sought. However, the Board noted the unique situation in which approval of the Canadian pipeline could lead to the creation of the crude oil off-loading facilities at Low Point, Washington, the construction and operation of which might have environmental impacts on the Canadian marine and coastal environment. The Board concluded that there was insufficient evidence before it at that time to assess the acceptability of the marine and coastal environmental risks to Canada. It was noted, however, that had there not been these unique marine environmental considerations, the Board would have been prepared to issue a certificate for the proposed Trans Mountain pipeline in Canada.

Against this background, the Board gave Trans Mountain the opportunity of having a rehearing of its application pursuant to section 17 of the National Energy Board Act, with the rehearing limited to evidence and submissions respecting the impacts of the U.S. project and the associated tanker traffic upon the Canadian marine and coastal environment. Trans Mountain availed itself of that opportunity and proceeded to assemble information as a basis for the rehearing. The Board directed that the studies which Trans Mountain should conduct be those necessary to assess the potential incremental impacts of the proposed overall project on the Canadian marine and coastal environment, in the context of the existing and likely oil terminal facilities in the Strait of Juan de Fuca and Puget Sound areas and the associated tanker traffic to those facilities now and in the future. The Applicant was further notified that the Board considered it appropriate that the results of the studies be filed by the end of August 1980. The filings were duly made and the new evidence was heard in Vancouver and Victoria in November and December 1980 and in January 1981. The rehearing concluded in Ottawa in March, 1981.

TRANS MOUNTAIN'S SUBMISSIONS AND EVIDENCE

The Applicant's studies and reports thereon covered a number of major areas, namely, physical and chemical oceanography, marine resource inventory and the associated impact assessment, inner waters oil spill risk analyses, inner and outer waters oil spill trajectory analyses, marine traffic and socio-economic inventory and associated impact assessment.

The objective of the Physical and Chemical Oceanography Study was to summarize the physical and chemical elements of the oceanography of the coast of British Columbia. The report on the study dealt with such matters as winds, air temperature, precipitation, visibility, waves, tides, current circulation along the coast, salinity, water temperature, and a variety of related subjects.

The Marine Resource Inventory and Impact Study summarized the biological resources that could be affected by an oil spill in British Columbia waters and assessed the impact of an oil spill on those resources.

The Inner Waters Oil Spill Risk Analysis assessed the incremental impact of the Trans Mountain system on the existing level of oil spillage risk in Canadian and U.S. waters. The analysis segregated risk by sources of oil spills, namely, tankers in transit, tankers at berth, storage tanks, pipelines, tank barges, non-oil transportation vessels and land sources such as urban run-off and waste water.

The Inner and Outer Waters Oil Spill Trajectory Analyses dealt with the direction in which oil spilled at various locations

along the British Columbia coast might move at different times of the year. Also considered were the physical and chemical processes relevant to the movement and fate of spilled petroleum.

The Marine Traffic Study provided information on the present level of marine traffic in B.C. coastal waters and assessed significant changes which would result from the Trans Mountain project. Estimates were provided of the number of tanker arrivals at Low Point, the makeup of the tanker fleet, and the safety record of vessels currently in the Alaskan oil trade.

The Socio-Economic Inventory and Impact Assessment provided an inventory and assessment of the sensitivity of Canadian coastal and marine socio-economic activities to the impacts associated with a so-called worst case oil spill.

In addition to the material filed on the subjects just described, Trans Mountain also filed an oil spill contingency plan prospectus which identified the proposed components and scope of an oil spill contingency plan which Trans Mountain would prepare. Such a plan is required under U.S. law to be filed with the U.S. Coast Guard at least 60 days prior to the commencement of operations of the Low Point oil terminal and associated pipeline facilities. Trans Mountain undertook to file a copy of this plan with the Board, and the Board would require that this be done.

The Applicant also provided, in advance of the reopened hearing, copies of the direct evidence of several panels of expert witnesses. Some of these panels elaborated upon the contents of the study reports and answered questions thereon. Amongst other expert

witnesses appearing for the Applicant was the harbour master and terminal superintendent of the Conoco oil terminal at Tetney in the Humber estuary. This terminal includes a single point mooring, the operation of which is similar to that proposed for Low Point. Also giving evidence were two representatives of the Canadian Coast Guard, who provided an update of progress in the development and introduction of the Vessel Traffic Management System which will regulate ship movements into and out of Juan de Fuca Strait.

INTERVENORS' SUBMISSIONS AND EVIDENCE

Not all intervenors presented evidence or submissions during the rehearing. The positions taken by those who did testify are described below.

Foothills Oil Pipe Line Ltd. provided three witnesses to speak to as many subjects. One criticized the Applicant's prospectus of the oil spill contingency plan for the proposed Low Point Terminal. Another gave opinions on possible variations in the supply of Alaskan North Slope crude oil to Trans Mountain's proposed pipeline. The third witness for Foothills presented a tanker traffic evaluation, the main thrust of which was to suggest that there would be a higher tanker arrival frequency at Low Point than that forecast by the Applicant and, accordingly, that two single point moorings as proposed by Trans Mountain would be insufficient.

The Canadian Scientific Pollution & Environmental Control Society (SPEC) tendered three panels of expert witnesses to speak to various parts of the application. The first of these panels consisted of three members of the Canadian Wildlife Service of Environment Canada; they discussed the Applicant's information on marine bird populations. The second panel was composed of members of the United Fishermen and Allied Workers Union (UFAWU) who gave their views on the effect of tanker traffic on fishing activities. A third panel, composed of staff from Fisheries and Oceans Canada, spoke on the potential impact of the proposed project on various aspects of the B.C. marine fishery. In summary, these panels were of the opinion that Trans Mountain's environmental data were of inadequate

reliability and depth to allow a decision to be made to approve the project. Further, the UFAWU witnesses felt that the project would have a detrimental effect on the B.C. fishing industry because, in their view, there would be increased tanker traffic and a corresponding increase in risk of an oil spill. The Fisheries and Oceans witnesses felt that the Applicant's study reports inadequately described the potential effects of oil spillage on the B.C. coast and, more specifically, on salmon populations and the areas they frequent. SPEC also submitted, through one of its witnesses from Fisheries and Oceans, a risk analysis which focussed on the potential impact of the proposed facilities on the Canadian fishing industry; the analysis lead to the conclusion that the risk to fishery resources would increase if the Trans Mountain proposal proceeded.

The Government of British Columbia filed a report setting forth the results of an assessment posed by a common use oil port at Low Point and the ensuing tanker traffic on the southern coast of British Columbia relative to existing and other potential ports in Juan de Fuca Strait. The author of the report was present as a witness. In the opinion of the witness, a single common use oil port in Juan de Fuca Strait with mandatory hook-up of Puget Sound refineries would significantly reduce inshore oil spill risk with only a marginal increase in the offshore oil spill risk.

The Victoria Group of the Sierra Club of Western Canada presented two witnesses. One made a presentation to illustrate concerns regarding the potential danger from an oil spill to the natural beauty of Vancouver Island, to the wild life and its habitat, and to the commercial fishery. The second witness criticized the

accuracy of some of the data assembled by Trans Mountain's environmental consultants. In summary, the Sierra Club felt that the Applicant's filed material did not permit an adequate comparison of the project's benefits and risks.

The Greater Victoria Chamber of Commerce filed a brief in which it expressed the view that the tourist industry throughout Vancouver Island and, specifically, in the Greater Victoria area would suffer seriously in the event of an oil spill occurring off the coast. The Victoria City Council supported the brief presented by the Chamber of Commerce.

Members of the Legislative Assembly of British Columbia, representing ridings on Vancouver Island, presented their views through the testimony of one of their group. In their opinion, the potential impacts of increased oil tanker traffic upon the fragile marine and coastal environment of Vancouver Island outweighed the benefits of the project to B.C.

The Member of Parliament for Cowichan-Malahat-The Islands expressed concern that the current information in regard to resource inventory and environmental impact was incomplete. The witness was critical of the application and asked that it be denied because there would be no long-term benefits for the people of Canada and because the project posed a threat to the people of his riding.

The Member of Parliament for Skeena submitted that the proposed project would bring with it an increased environmental threat to the coast of British Columbia and, accordingly, the application should be denied.

The Planning Department of Island County, Washington, filed a submission which argued that the Applicant's risk analysis methodology ignored many factors likely to contribute to large spills.

DISPOSITION

In its Reasons for Decision of January 1980 which, together with this report, constitute the decision on Trans Mountain's application, the Board set forth its findings and conclusions on the matters it considered relevant to the certification of the proposed pipeline in Canada. In that January 1980 report, the Board stated, in summary, that it was satisfied on all matters related to the construction and operation of the pipeline in Canada for which certification was sought. It went on to state that, had it not been for certain unique marine environmental considerations, the Board would have been prepared to issue a certificate.

At the commencement of the reopened proceedings, Foothills made a motion that the rehearing should be expanded to include information with respect to the supply of crude oil from Alaska. The Board agreed that, to the extent the evidence to be considered affected the tanker traffic supplying Trans Mountain's proposed facility at Low Point, the matter was relevant and would be considered.

The Foothills submission included little new direct evidence of the availability of Alaska crude oil, but was rather a reinterpretation of information which was available to the Board at the time of the original hearing. Considering this and the fact that the facilities proposed by Trans Mountain would be available to handle crude shipped to it from anywhere in the world, the Board sees no reason to change the position expressed in its previous Reasons for Decision that an adequate supply of crude oil is available for the proposed facilities.

In this report on the final disposition of the Trans Mountain application, those matters already covered in the January 1980 Reasons for Decision will not be dealt with again. There remains only the subject matter of the rehearing, that is, the potential incremental impacts of the U.S. part of the overall Trans Mountain project on the marine and coastal environment in Canada. The Board has concluded that, with the record of the rehearing before it, there is now sufficient evidence for it to assess the acceptability of the potential marine and coastal impacts.

The Board has carefully considered all of the evidence and views put before it and recognizes the contributions of those who appeared at the public hearing. All parties to the proceedings would undoubtedly agree that much of the input was, of necessity, subjective; many facets of the matters under review had to be considered on the basis of expert opinions rather than in terms of absolute fact.

The Board was earlier satisfied to the point of being prepared to issue a certificate, except for the absence of sufficient evidence on marine and coastal environment matters. It now would refuse a certificate if the evidence from the rehearing established that Trans Mountain's proposal had associated with it potential "costs" which would more than offset the benefits earlier found to be favourable to the granting of a certificate. It must be stressed, however, that the Board has no mandate to consider in an absolute sense the whole subject of west coast tanker traffic, nor can it cover the entire field of oil spills per se. Rather it must focus on

the application for certification of the pipeline proposal under its jurisdiction, assessing whether there is a reasonable likelihood that construction and operation of the facilities would expose the marine and coastal environment of Canada's west coast to an unacceptable increase in the risk of oil spill damage over that which otherwise exists or will exist. Having made that assessment, the Board does not find that there is likely to be an unacceptable increase in such risk. Further to the above finding, the Board has concluded that, with the hook-up of U.S. Puget Sound refineries which Trans Mountain proposes as an integral part of its project, there would be a decrease in the risk of oil spill damage in the inner waters from tankers in transit.


The oil spill risk decrease just referred to would materialize only if the U.S. Puget Sound refineries made significant use of the proposed facilities of Trans Mountain in the United States. Trans Mountain's policy witness testified that service to these refineries could be provided at an economically attractive cost. Even if the refiners were not inclined to use the service voluntarily, there is the possibility that hook-up would be mandatory. Furthermore, should one or more refiners choose not to use the hook-up facilities, the Trans Mountain proposal would still be no less advantageous than the alternative Northern Tier project.

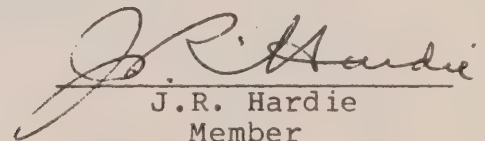
The Board would want to be satisfied, as a condition precedent to the construction of the proposed pipeline in Canada, that not only would hook-up facilities be provided, but that sufficient use would be made of them to materially reduce tanker traffic into Puget Sound. A certificate would be conditioned accordingly.

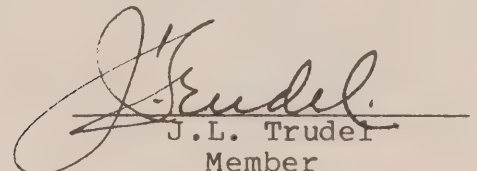
As noted in its Reasons for Decision of January 1980, the Board would also attach certificate conditions setting forth requirements in respect of pipeline design, operations and maintenance, the financing plan, regional social and economic impacts, Canadian content and a variety of environmental requirements.

The specific conditions which would be attached to the certificate are set out in Appendix II.

To recapitulate, the Board has had regard to the matters discussed in its Reasons for Decision of January 1980 and the additional matters dealt with herein. Having taken into account all such matters as to it appear to be relevant, the Board finds that the proposed pipeline for which certification is sought by Trans Mountain is and will be required by the present and future public convenience and necessity. Accordingly, the Board is prepared to grant a certificate pursuant to Section 44 of the Act subject to the approval of the Governor in Council.


R.F. Brooks
Presiding Member


J.R. Hardie
Member


J.L. Trudel
Member

TRANS MOUNTAIN OIL PIPE LINE CORPORATION PROPOSED PIPELINE FACILITIES UNITED STATES

(WITH "HOOK-UP" OF THE NORTHERN PUGET SOUND REFINERIES)



TERMS AND CONDITIONS

1. The pipeline facilities to be constructed pursuant to this certificate shall be the property of and shall be operated by Trans Mountain Pipe Line Company Ltd.
2. Trans Mountain shall, unless otherwise authorized or ordered by the Board, cause the facilities in respect of which this certificate is issued to be designed, manufactured, located, constructed and installed in accordance with specifications, plans, drawings, and procedures approved pursuant to the terms and conditions contained herein.
3. Trans Mountain shall, unless otherwise authorized or ordered by the Board, implement or cause to be implemented all the policies, practices and procedures for the protection of agricultural land and the environment included in its environmental reports and as otherwise adduced in evidence before the Board.
4. Prior to construction, Trans Mountain shall demonstrate to the satisfaction of the Board:
 - i) that adequate financing has been arranged; and
 - ii) that adequate plans and procedures have been developed for project cost control.
5. Prior to construction, Trans Mountain shall file, the following items:
 - i) a line list for the proposed pipeline route;
 - ii) a listing and the status of acquisition of all properties where multiple pipeline easements are not held;
 - iii) the location and status of any mine, mining claim and/or borrow resources along the proposed route; and

iv) copies of any executed throughput contracts and/or deficiency agreements.

6. Prior to construction, Trans Mountain shall satisfy the Board with respect to:

- i) approval of Parks Canada concerning the construction through Jasper National Park and specifically the Windy Point deviation;
- ii) approval of the appropriate authorities for the routing within the "Edmonton Service Corridor";
- iii) discussions with the Ministry of Highways and Public Works of the Province of British Columbia concerning the possible joint highway and pipeline construction through the Coquihalla Pass area; and
- iv) discussions with the Indian bands concerning the construction across the 12 Indian Reserves along the proposed pipeline route.

7. Prior to construction, Trans Mountain shall submit for approval by the Board, the final design for each portion of the pipeline system, including

- i) the location of mainline shut-off valves and check valves,
- ii) details of the leak detection system; and
- iii) the plans and locations for facilities such as pump stations and tank farms.

8. Prior to construction, Trans Mountain shall submit for Board approval its plans and procedures for the disposal of excess subsoil from the pipeline trench.

9. Prior to construction, Trans Mountain shall discuss with each landowner:

- i) the current schedule for pipeline construction;
- ii) the soil conservation procedures; and
- iii) the restoration procedures for topsoil and agricultural drainage systems that would be implemented by the Applicant during construction

and shall report to the Board on the results of those discussions.

10. Prior to construction, Trans Mountain shall submit for approval by the Board:

- i) the current construction schedule for each pipeline spread, incorporating the environmental consultant's recommendations for timing construction activity to avoid sensitive periods of fish and wildlife life-cycles, and meeting the requirements of other relevant federal and provincial regulatory agencies; and
- ii) the construction and contract specifications, incorporating the environmental procedures manual which shall include at least:
 - 1) a system for managing environmental affairs; and
 - 2) practices for protecting or mitigating environmentally sensitive aspects of the project.

11. Prior to construction, Trans Mountain shall develop and submit programs for approval by the Board for implementing

- i) environmental awareness training of construction personnel;
and
- ii) engineering and environmental inspection.

12. During pipeline construction, Trans Mountain shall submit for approval by the Board:
 - i) every two months, a construction report satisfactory to the Board which shall detail the progress and current status of the project; and
 - ii) any revisions to the construction schedule and, where necessary, corresponding changes to the applicable environmental mitigative measures.
13. During pipeline construction through the Nojack Experimental Forest, Trans Mountain shall confine all construction activity to the existing right-of-way and shall fence the edge of the right-of-way to prevent movement of construction vehicles off that right-of-way.
14. Trans Mountain shall, prior to leave-to-open being granted, submit for the approval of the Board:
 - i) an operations and maintenance manual; and
 - ii) an emergency procedures manual.
15. Prior to leave-to-open being granted, Trans Mountain shall submit for approval by the Board a complete program for monitoring:
 - i) crop productivity on the right-of-way, which program shall include comparisons between right-of-way crop productivity and adjacent fields; and
 - ii) the condition of the right-of-way with particular attention to areas where there is significant potential for adverse environmental impact.

16. After leave-to-open has been granted, Trans Mountain shall, unless otherwise authorized by the Board, submit to the Board within twelve months:

- i) a report, satisfactory to the Board, describing the implementation of the policies, practices and procedures referred to in Condition 3. That report shall include:
 - a) an assessment of the effectiveness of said policies, practices and procedures; and
 - b) details of any deviations from said policies, practices and procedures; and
- ii) a report on the regional social and economic impact related to the construction of the facilities. The report shall detail the levels of local employment related to the project, the extent of local business involvement, and any other significant social or economic impacts;
- iii) a report, satisfactory to the Board, detailing:
 - a) for each cost category in Exhibit No. 18, Table II-8-1 (revised) and the Construction Cost Estimate in Exhibit No. 23, Tab 2, the percentage Canadian content achieved, any variations from the estimates in the application and the reasons for such variations; and
 - b) with respect to the cost categories in Pipe, Pumps, Diesel Engines, Electric Motors, Valves, Fittings, Coatings in Table II-8-1 (revised) and the Construction Cost Estimate in Exhibit No. 23, Tab 2, a statement setting forth which Canadian firms were asked to make contractual bids and the names of the firms to which contracts were awarded.

17. During the first winter after start-up, Trans Mountain shall submit to the Board the results of noise emission surveys conducted at each pump station. The surveys are to be conducted on a clear, cold, dry day with the pump station operating at full capacity, unless otherwise authorized or ordered by the Board.
18. Annually for three years after leave-to-open has been granted, Trans Mountain shall submit reports, for approval by the Board, describing the results of the monitoring programs referred to in Condition 15 herein. The reports shall include a description of any actions taken or measures implemented to prevent or mitigate any long-term effects upon the environment of pipeline construction.
19. Trans Mountain shall not commence construction of the pipeline in Canada until it has filed with the Board copies of the appropriate U.S. regulatory authorizations for construction of the Low Point oil port and related pipeline facilities to be built by Trans Mountain Oil Pipe Line Corporation in the State of Washington, U.S.A.
20. Trans Mountain shall not commence construction of the pipeline in Canada until it has filed evidence with the Board demonstrating, to the satisfaction of the Board, that the Low Point oil port and related pipeline facilities will, in fact, be used to supply in whole or in part the crude oil requirements of the refineries at Ferndale, Anacortes and Cherry Point in the State of Washington, U.S.A.

21. Prior to leave to open being granted, Trans Mountain shall file with the Board a copy of the oil spill contingency plan which Trans Mountain Oil Pipe Line Corporation will be filing with the appropriate U.S. regulatory authority at least 60 days prior to the commencement of operations of the Low Point oil port and associated pipeline facilities.
22. Unless, upon application by Trans Mountain, a later date is fixed by the Board, this Certificate shall expire:
 - i) on 31 December 1982, if Trans Mountain has not complied with Condition 19 hereof; or
 - ii) on 31 December 1983, if Trans Mountain has not commenced construction of the pipeline authorized by this Certificate.

